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REMARKS

Election/Restrictions

Applicant affirms the telephonic election made with traverse to prosecute the invention of Invention I, claims 1-14, made on March 17, 2005. Claims 15-35 are withdrawn from consideration without prejudice.

Claim Rejections - 35 USC §112

Claim 14 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite in for filing to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Regarding claim 14, this claim has been cancelled.

Claim Rejections - 35 USC §102

Claims 1-14 are rejected under 35 U.S.C. §102(e) as being anticipated by Ott (US 6,182,264, hereinafter "Ott").

The Examiner states:

"Regarding independent Claim 1, Ott discloses a method for smart dynamic selection of error correction related to digital enhanced cordless telephony (DECT), and other error-prone bi-directional data transmission systems, comprising:

...
Correcting errors based upon a detected error rate (e.g., bit error rate) in receiver data stream 118 and the signal quality of transmission channel 113, as determined by error/signal quality detector 117, which determines the error rate in receiver data stream 118 as system 100 operates and select control 115 and 109 dynamically update the currently selected encoder-decoder pair via feedback channel 114 in order to coordinate the encoder-decoder pair to be used."

Regarding independent claim 1, this independent claim has been clarified to amend the previously claimed combination, as exemplified in claim 1, to now contain the limitation of:

"determining the performance of the portion of the network from the transmission point to the destination."

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The support for the above amendment is on Application page 10, line 23 through page 12, line 3:

“Pattern generator 600 generates a test signal for transmission in the upstream channel of LACL 110. ...

When the CMTS 100 returns the test signal to Tester 400, Tester 400 receives the returned signal through the forward channel...to forward error corrector 606. ... Forward error corrector 606 then passes the corrected test signal to comparator 604.

.... Comparator 604 then compares the corrected test signal to the original test signal received from pattern generator 600. ...

...comparator 604 transmits a signal to output device 512, shown in Figure 5. Output device 512 then outputs the result of the test.” [deletions for clarity]

Ott discloses determining the performance of the transmission channel 113 but does not disclose anything about determining the performance of the feedback channel 114. The disclosure related to both channels is disclosed in Ott col. 5, lines 15-47:

“System 100 functions by transmitting user data from transmitter data stream 101 to receiver data stream 118 via transmission channel 113. In accordance with the present invention, system 100 dynamically selects the error correction technique used for transmission and reception depending upon the transmission characteristics of the transmission channel 113.

...
The operation of selector 108 and selector 116 is controlled by select control 109 and select control 115 respectively, where select control 109 is slaved to select control 115 via feedback channel 114.” [deletion for clarity]

In the present invention, a test signal is sent upstream to a destination where an error correction code is imposed on the test signal. The test signal is then returned down the forward channel and the error correction is applied to remove errors due to the forward channel. This means errors in the upstream channel are left on the test signal. The test signal with the upstream errors is compared to the original test signal, and the performance of the upstream channel (the equivalent of the Ott feedback channel) is determined.

Based on the above, it is respectfully submitted that claim 1 is allowable under 35 USC §102(e) as not being anticipated by Ott because:

“Anticipation requires the disclosure in a single prior art reference disclosure of each and every element of the claim under consideration.” W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303, 313 (Fed.

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Cir. 1983) (citing *Soundscriber Corp. v. United States*, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), *adopted*, 149 USPQ 640 (Ct. Cl. 1966)), *cert. denied*, 469 U.S. 851 (1984). *Carella v. Starlight Archery*, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.), *modified on reh'g*, 1 USPQ 2d 1209 (Fed. Cir. 1986); *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

The Examiner states:

"Regarding Claim 2, Ott discloses determining the performance of the transmission channel 113 of the network using the corrected signal, as determined by error/signal quality detector 117."

Regarding Claim 2, this dependent claim has been clarified to amend the previously claimed combination to now contain the limitation of:

"transmitting the signal further comprises transmitting signal packets."

The support for the above amendment is on page 11, lines 1-2:

"Addresser 602 loads the test signal into the payload of one or more packets for transmission in the upstream channel."

Ott does not disclose transmitting signal packets, which are test signals. Ott discloses only that a selection signal is required to control an encoder in Ott col. 6, lines 17-20

"The feedback channel is only required to transmit that amount of information necessary to indicate which encoder to use for acceptable signal quality and bit error performance."

Based on the above, it is respectfully submitted that claim 2 is allowable under 35 USC §102(e) as not being anticipated by Ott because:

"“If the reference fails to teach or suggest even one limitation of the claimed invention, then the claim is not anticipated.” *Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750 F.2d 1569, 1574, 224 U.S.P.Q. 409, 411 (Fed. Cir. 1984)."

The Examiner states:

"Regarding Claim 3, Ott discloses correcting step uses forward error correction techniques using a CRC Cyclic Redundancy Check by employing a CRC encoder 102 in the transmitter and a corresponding CRC decoder 110 in

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the receiver and using the CRC Cyclic Redundancy Check for calculating local check sum and comparing to transmitted check sum to detect errors in received data RS Reed-Solomon block code forward error correction.”

Regarding Claim 3, this dependent claim has been clarified to amend the previously claimed combination to now contain the limitation of:

“receiving the signal at the destination includes receiving the signal with first errors caused by transmission through a first portion of the network;
returning the signal to the transmission point includes returning the signals with second errors caused by transmission through a second portion of the network;
correcting the second errors to leave the first errors in the signal; and
comparing the signal with the first errors with the signal transmitted at the transmission point to determine the performance of the first portion of the network.”

The support for the above amendment is on Application page 10, line 23 through page 12, line 3, *supra*.

As explained for claim 1, Ott discloses determining the performance of the transmission channel 113 but does not disclose determining the performance of the feedback channel 114.

Based on the above, it is respectfully submitted that claim 3 is allowable under 35 USC §102(e) as not being anticipated by Ott because:

“Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” [*emphasis added*] *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.* (730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)))”

The Examiner states:

“Regarding Claim 4, Ott discloses discarding error by employing an Automatic Repeat Request (RS+ARQ encoder 104) in the transmission device coupled to a corresponding (RS+ARQ decoder 112) in the receiving device via a transmission channel 113, and using redundancy in the transmitted data to detect and remove errors in received data ARQ Automatic Repeat Request, by asking for re-transmission of data received with uncorrectable errors.”

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Regarding Claim 4, this dependent claim has been clarified to amend the previously claimed combination to now contain the limitation of:

"discarding the portions of the signal that contain residual errors." [underlining for clarity]

The support for the above amendment is on page 14, lines 6-8:

"In step 714, the method determines if any residual errors are present in the corrected signal. If there are residual errors, the method discards the portion of the signal that contains the residual errors in step 716 and returns to step 700."

Ott does not disclose discarding residual errors in portions of a signal. Ott does not mention residual errors. Ott discloses asking for retransmission of the signal where the forward error correction (for main errors rather than residual errors) cannot make corrections in Tables 1 and 2.

Based on the above, it is respectfully submitted that claim 4 is allowable under 35 USC §102(e) as not being anticipated by Ott because each and every element is not disclosed. *W.L. Gore & Assocs. v Gralock, Inc., supra.*

The Examiner states:

"Regarding Claim 5, Ott discloses error/signal quality detector 117 for detecting error rate (e.g., bit error rate) in receiver data stream 118, Figure 1."

Regarding Claim 5, this dependent claim has been clarified to amend the previously claimed combination to now contain the limitation of:

"comparing the signals tests for bit error rate, block error rate, or a combination thereof." [underlining for clarity]

The support for the above amendment is on page 14, lines 20-27:

"The preferred test for determining the performance of the upstream channel is a bit error rate test...

An alternate test at step 718 is the block error rate test." [deletion for clarity]

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Ott does not disclose comparing a signal containing first errors with the original transmitted signal. Ott discloses determining bit error from a received signal as disclosed in Col. 6, lines 49-55:

"The particular technique (e.g., CRC, RS, RS+ARQ) employed by system 100 depends upon the transmission quality of transmission channel 113. More particularly, the technique employed depends upon the detected bit error rate in the receiver data stream 118 of the receiving device and the quality of the signal received from transmission channel 113." [underlining for clarity]

Based on the above, it is respectfully submitted that claim 5 is allowable under 35 USC §102(e) as not being anticipated by Ott because each and every element is not disclosed. *W.L. Gore & Assocs. v Gralock, Inc., supra.*

The Examiner states:

"Regarding independent Claim 6, Ott discloses a method for smart dynamic selection of error correction related to digital enhanced cordless telephony (DECT), and other error-prone bi-directional data transmission systems, comprising:

...
Detecting error rate (e.g., bit error rate) in receiver data stream 118 and the signal quality of transmission channel 113, as determined by error/signal quality detector 117, which determines the error rate in receiver data stream 118 as system 100 operates and select control 115 and 109 dynamically update the currently selected encoder-decoder pair via feedback channel 114 in order to coordinate the encoder-decoder pair to be used.
..."

Regarding independent Claim 6, this independent claim has been clarified to amend the previously claimed combination to now contain the limitation of:

"determining the performance of the portion of the network from the transmission point to the destination."

The support for the above amendment is on Application page 10, line 23 through page 12, line 3, *supra.*

Ott discloses determining the performance of the transmission channel 113 but does not disclose determining the performance of the feedback channel 114. The disclosure related to both channels is disclosed in Ott col. 5, lines 15-47, *supra.*

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In the present invention, a test signal is sent upstream to a destination where an error correction code is imposed on the test signal. The test signal is then returned down the forward channel and the error correction is applied to remove errors due to the forward channel. This means errors in the upstream channel are left on the test signal. The test signal with the upstream errors is compared to the original test signal and the performance of the upstream channel (the equivalent of the Ott feedback channel) is determined.

Based on the above, it is respectfully submitted that claim 6 is allowable under 35 USC §102(e) as not being anticipated by Ott because each and every element is not disclosed. *W.L. Gore & Assocs. v Gralock, Inc., supra.*

Regarding claim 7-14, these dependent claims respectively depend from independent claim 6 and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof. Claim 14 has been canceled.

It is respectfully submitted that the now amended independent claim 6, and the respective claims 7-13 depending therefrom, are not anticipated by Ott under 35 USC §102 and are not obvious in combination under 35 USC §103 with the other cited references because:

“[T]he prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure.” *In re Vaeck*, 947 F2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

Conclusion

In view of the above, it is submitted that the claims are in condition for allowance and reconsideration of the rejections is respectfully requested. Allowance of claims 1-13 at an early date is solicited.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including any extension of time fees, to Deposit Account No. 50-0374 and please credit any excess fees to such deposit account.

Respectfully submitted,



Mikio Ishimaru
Registration No. 27,449

The Law Offices of Mikio Ishimaru
1110 Sunnyvale-Saratoga Rd., Suite A1
Sunnyvale, CA 94087
Telephone: (408) 738-0592
Fax: (408) 738-0881
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